

Notice of Allowability

Application No.

10/763,681

Examiner

Brian J. Livedalen

Applicant(s)

ATZENI ET AL.

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 9/10/2007.
2. ☒ The allowed claim(s) is/are 1-29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material


5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

DETAILED ACTION

This action is in response to amendment filed 9/10/2007. Claims 1-29 are pending.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anthony Handal on Sept. 20, 2007.

The application has been amended as follows:

Claim 1, line 22: change "said heterodyne signal" to --its respective one of said heterodyne signals--.

Claim 1, line 27: change "said heterodyne signal" to --its respective one of said heterodyne signals--.

Claim 1, line 31: change "low-frequency reference modulation products" to --reference modulation product--.

Art Unit: 2878

Claim 17, line 22: change "heterodyne signals" to --heterodyne frequencies--.

Claim 17, line 23: change "heterodyne signals" to --heterodyne frequencies--.

Claim 20, line 22: change "heterodyne signals" to --heterodyne frequencies--.

Claim 24, line 25: change "said heterodyne signal" to --its respective one of said heterodyne signals--.

Claim 24, line 30: change "said heterodyne signal" to --its respective one of said heterodyne signals--.

Claim 27, lines 8 and 9: replace "stimulate the production of a measurement light signal" to --to be focused as an image onto a multielement optical detector to stimulate the production of a plurality of measurement signals--.

Claim 27, lines 10 and 11: change "measurement light signal and said heterodyne frequencies to a first mixer" to --plurality of measurement light signals and said heterodyne frequencies to a first mixer to generate a plurality of measurement product outputs--.

Claim 27, line 12: insert --to generate a plurality of reference modulation product outputs-- after "to a second mixer".

Claim 27, lines 14 and 15: change "sending the output of said first and second mixers to a computer for analysis of said sample" to --sending the plurality of measurement product outputs of said first mixer and the plurality of reference modulation products of said second mixer to a computer for analysis of said sample--.

Allowable Subject Matter

Claims 1-29 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 1-29 are neither anticipated nor made obvious by the prior art of record.

In regard to claims 1, 16, 17, 20, and 24, the prior art fails to disclose a method of spectrographic measurement comprising, along with the other claimed features, generating a plurality of modulation frequencies coupled to an excitation source, the excitation source generating light to fall onto a sample, generating a plurality of heterodyne frequencies, each of said heterodyne frequencies being associated with a modulation frequency, sampling a portion of the excitation energy to form a reference excitation signal; focusing an optical signal from the sample on to an image intensifier; receiving an intensified image modulated with the plurality of modulation frequencies on a multielement detector; generating a plurality of measurement signals using the multielement detector; each measurement signal associated with a single one of the

Art Unit: 2878

elements of the multielement detector; for each measurement signal associated with an element of said multielement optical detector, and mixing the measurement signal with a respective heterodyne signal to generate a low-frequency modulation product.

In regard to claim 27, the prior art fails to disclose a method of spectrographic measurement comprising, along with the other claimed features, generating light modulated by a plurality of modulation frequencies, generating a plurality of heterodyne frequencies, each of said heterodyne frequencies being associated with a modulation frequency, splitting the light modulated by the plurality of modulation frequencies into reference light and measurement light, causing the measurement light to fall onto a sample to be assayed and to be focused as an image onto a multielement optical detector to stimulate the production of a plurality of measurement light signals; sending the plurality of measurement light signals and the heterodyne frequencies to a first mixer to generate a plurality of measurement product outputs; sending the heterodyne frequencies and the reference light to a second mixer for generating a plurality of reference modulation product outputs; and sending both outputs to a computer for analysis of the sample.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Livedalen whose telephone number is (571) 272-2715. The examiner can normally be reached on 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bjl


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